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10/720,488	11/25/2003	Yasushi Sayama	2038-309	4367
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LOWE HAUPTMAN BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314			EXAMINER HAND, MELANIE JO	
			ART UNIT	PAPER NUMBER
			3761	

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/720,488

Applicant(s)

SAYAMA ET AL.

Examiner

Melanie J. Hand

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed April 27, 2006, with respect to the rejection of claims 2-10 under 35 U.S.C. 102/103 and the rejection of claims 4-21 under 35 U.S.C. 103 have been fully considered and are persuasive. The rejections of claims 2-10 and 4-21 have been withdrawn.

### ***Claim Objections***

Claims 2 and 8 are is objected to because of the following informalities: the phrase "said back and forth direction" in claim 2 lacks antecedent basis in claim 11 from which it depends. The phrase "said woven film" in claim 8 lacks sufficient basis in clam 7 from which it depends because the woven film is one of a group of items from which one of ordinary skill in the art chooses from, thus not guaranteeing antecedent basis for a woven film. Appropriate correction is required.

Claim 19 is objected to because of the following informalities: the phrase "each said strip members defining one of the slip zones and one of the slip zones" appears to be a typographical error. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 4 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for anti-slip zones comprised of inelastic thermoplastic fibers mixed with plastic elastomer fibers in a particular weight ratio and the respective types of fibers having substantially identical melting points, does not reasonably provide enablement for an anti-slip zone having an average kinetic frictional force of 0.5 or higher under a load of 58.23 g/9 cm<sup>2</sup> or an average kinetic frictional force of 5 N or less under a load of 340 g/9 cm<sup>2</sup>. Such forces yield particular static and kinetic coefficients of friction that are inherent characteristics of two materials when they are sliding against one another. The values set forth in claim 4 do not produce a kinetic coefficient of friction that satisfies both ranges set forth in claim 4. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. Claims merely setting forth physical characteristics desired in article, and not setting forth specific compositions which would meet such characteristics, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart desired characteristics; thus, expression "a liquefiable substance having a liquefaction temperature from about 40°C. to about 300°C. and being compatible with the ingredients in the powdered detergent composition" is too broad and indefinite since it purports to cover everything which will perform the desired functions regardless of its composition, and, in effect, recites compounds by what it is desired

that they do rather than what they are; expression also is too broad since it appears to read upon materials that could not possibly be used to accomplish purposes intended.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kline in view of Sherrod.

With respect to **Claim 2**: Kline teaches that diaper 20 has leg elastic cuffs. Kline does not teach that the portions of fastening element 49 responsible for resistance to peel mode disengagement (anti-slip zones) cover parts of said leg elastic cuffs or that they lie on respective extensions of said leg elastic members in the transverse direction. Sherrod teaches coating said bottomsheet 28 with an anti-skid coating over substantially all of said sheet. Sherrod teaches that this prevents back and forth movement of said absorbent article, thus it would be obvious to one of ordinary skill in the art to apply a skid-resistant material to areas near the elastic leg cuffs to prevent movement during wear that could cause chafing.

With respect to **Claims 3,10**: Kline teaches using alternate materials near or on fastening element 49 to effect resistance to peel mode disengagement. These regions around and on fastening element extend toward a centerline bisecting a width of said diaper. Regions that are adjacent the peel-mode disengagement material areas constitute areas with a potential for disengagement, or slip zones. Such slip zones necessarily exhibit an average kinetic frictional force that is lower than the average kinetic force exhibited by the anti-slip peel mode

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disengagement resisting areas, as the higher frictional force in the anti-slip areas is what lends the anti-slip attribute to those areas.

With respect to **Claims 4,9**: Kline teaches a diaper 20 having chassis 22 (main portion) comprising front waist region 36, rear waist region 38 and crotch region 37 extending in a longitudinal direction between front waist region 36 and rear waist region 38. Chassis 22 has an inner, body-facing surface and an outer, garment-facing surface opposite said body-facing surface. Diaper 20 has end edges 52 that extend parallel to one another in a waist-surrounding direction, and side edges 50 extending in parallel to each other in the longitudinal (back and forth) direction crossing said waist-surrounding direction. Attached to side edges 50 are side panels 30 (pair of wing portions) in both the front and rear waist regions (claim 9) comprised of elastic material, stretchable in the waist-surrounding direction, that extend outwardly in a transverse direction of diaper 20 in each of said waist regions. Surface fastening system is comprised of at least one first fastening element 48 and at least one second fastening element 49. The elements 48 and 49 of said fastening system are disposed at the distal ends of side panels 30 (wing portions) wherein the retaining material 14 that functions as the fastening material is disposed on the inner (body-facing) surfaces of said fastening elements 48, 49, said inner surface being contiguous with the inner (body-facing) surface of side panels 30. Fastening elements 48 are releasably engagable with fastening elements 49 (landing zones) attached to the outer surface of chassis 22 in the front waist region 36 via retaining elements 14 for attaching said waist regions 36,38 together. Fastening system 40 is designed to achieve resistance against peel-mode disengagement (anti-slip) by altering the dimension of the engaging area and using alternate materials (i.e. creating anti-slip zones) near or on fastening

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element 49 (i.e. surrounding and/or on opposite sides of said element), which would thus be near or on the outer surface of chassis 22 in the front waist region 36.

Kline teaches that backsheet 26 is comprised of a thermoplastic film, but teaches that the backsheet 26 is elastically extensible, and therefore does not teach inelastic thermoplastic fibers. Sherrod teaches an absorbent laminate for use in absorbent articles that comprises a skid-resistant coating applied to portions of bottomsheet 28. Sherrod teaches that the skid-resistant composition is comprised of ethylvinyl acetate copolymers, which are inelastic, and ethylene propylene copolymers, which are thermoplastic/elastomer fibers. Kline teaches that this coating prevents movement of the article during use, therefore it would be obvious to one of ordinary skill in the art to apply the coating taught by Sherrod to the area surrounding the landing zone fastening elements taught by Kline so as to enhance the peel mode disengagement resistance taught by Kline and to prevent chafing of the user's skin from movement of said article.

The values set forth in claim 4 for load and frictional force yield a kinetic coefficient of friction of  $\mu(k)=.9 \times 10^{-4}$  under a load of 58.23 g/9 cm<sup>2</sup> and  $\mu(k)=0.013$  for a load of 340 g/9 cm<sup>2</sup>. Kline does not teach an average kinetic frictional force for peel mode disengagement of fastening elements 49 relative to the inner surface of side panels 30. Sherrod teaches a static coefficient of friction that is greater than 0.7. Applying the kinetic coefficients of friction implicitly set forth by applicant in claim 4 to the bottomsheet with anti-skid coating taught by Sherrod, the  $F_{\max}$  for a load (=normal force at rest) of 58.23 g/9cm<sup>2</sup> is 45.29 N, which is greater than 0.5 N, and  $F_{\max}$  (load of 340 g/9 cm<sup>2</sup>) = 264 N. Since the coefficient of static friction of two entities is always higher than the coefficient of kinetic friction, the kinetic force will be lower than 264 N. Though Sherrod does not explicitly teach 5 N or lower, such a range is considered herein to be an optimization as applicant has not set forth a particular criticality and such range, as stated

previously, is not enabled by the disclosure. It would be obvious to one of ordinary skill in the art to modify the materials taught by Kline and Sherrod so as to have a kinetic frictional force in the range set forth in claim 4 under the load set forth in claim 4, as Sherrod teaches that the anti-skid coating prevents relative movement of the diaper, preventing chafing of the user's skin.

Kline teaches that backsheet 26 is comprised of a thermoplastic film, but teaches that the backsheet 26 is elastically extensible, and therefore does not teach inelastic thermoplastic fibers. Sherrod teaches an absorbent laminate for use in absorbent articles that comprises a skid-resistant coating applied to portions of bottomsheet 28. Sherrod teaches that the skid-resistant composition is comprised of ethylvinyl acetate copolymers, which are inelastic, and ethylene propylene copolymers, which are thermoplastic/elastomer fibers. Sherrod teaches by reference to U.S. Patent No. 6,075,179 to McCormick et al that the fibers (i.e. inelastic and elastic) present in bottomsheet laminate 28 are staple fibers, which are known in the art to have a length in the range set forth in claim 4 for both types of fibers. Sherrod teaches that this coating prevents movement of the article during use, therefore it would be obvious to one of ordinary skill in the art to apply the coating taught by Sherrod to the area surrounding the landing zone fastening elements taught by Kline so as to enhance the peel mode disengagement resistance taught by Kline and to prevent chafing of the user's skin from movement of said article.

With respect to **Claim 5**: Sherrod teaches by reference to '179 that the fibers are long, essentially continuous fibers ('179, Col. 6, lines 53-55).



With respect to **Claim 6**: Sherrod teaches a coating that contains copolymers (i.e. 1:1 weight ratio for the block components, equivalent to a 5:5 ratio) and thus teaches weight ratios that satisfy the ranges set forth in claim 6.

With respect to **Claim 7**: Sherrod teaches that the bottomsheet 28 containing elastic and inelastic fibers (by virtue of containing coating 30) is a multilaminate, therefore the outer surface layer is bonded to another non-woven film.

With respect to **Claim 8**: Sherrod teaches by reference to '179 that laminate bottomsheet 28 contains at least one meltblown layer, which would necessarily require that the inelastic and nonwoven elastic fibers have substantially identical melting points.

With respect to **Claim 11**: Kline teaches a diaper 20 having chassis 22 (main portion) comprising front waist region 36, rear waist region 38 and crotch region 37 extending in a longitudinal direction between front waist region 36 and rear waist region 38. Chassis 22 has an inner surface adapted to face a wearer in use and an outer surface adapted to face away from the wearer in use. Side panels 30 (pair of wing portions) extend outwardly in a transverse direction of diaper 20 from transversely opposite side edges 50 of chassis 22 in each of said waist regions. Side panels 30 have inner surfaces adapted to face a wearer in use and an outer surface adapted to face away from the wearer in use. Side panels 30 have distal ends and proximal ends that are closer to the respective one of the side edges 50 of chassis 22 than the respective distal end. Surface fastening system is comprised of at least one first fastening element 48 and at least one second fastening element 49. The elements 48 and 49 of said fastening system are disposed at the distal ends of side panels 30 (wing portions) wherein the

retaining material 14 that functions as the fastening material is disposed on the inner surfaces of said fastening elements 28,29, said inner surface being contiguous with the inner surface of side panels 30. The proximal ends of side panels 30 are free of fastening elements. Fastening elements 48 are releasably engagable with fastening elements 49 (landing zones) attached to the outer surface of chassis 22 in the front waist region 36 via retaining elements 14 for attaching said waist regions 36,38 together. Fastening system 40 is designed to achieve resistance against peel-mode disengagement (anti-slip) by altering the dimension of the engaging area and using alternate materials (i.e. creating anti-slip zones) near or on fastening element 49 (i.e. surrounding and/or on opposite sides of said element), which would thus be near or on the outer surface of chassis 22 in the front waist region 36. The anti-slip zones of fastening element 49 would therefore be contactable with predetermined areas of the inner surfaces of the proximal ends of side panels 30 in rear waist region 38 when the diaper is in use configuration and when the fastening elements 48 are engaged with fastening elements 49 (landing zone). Peel mode disengagement resistance resists relative movement between the predetermined areas of the proximal ends of said wing portions and the opposing waist region to a fastening element.

Kline teaches that backsheet 26 is comprised of a thermoplastic film, but teaches that the backsheet 26 is elastically extensible, and therefore does not teach inelastic thermoplastic fibers. Sherrod teaches an absorbent laminate for use in absorbent articles that comprises a skid-resistant coating applied to portions of bottomsheet 28. Sherrod teaches that the skid-resistant composition is comprised of ethylvinyl acetate copolymers, which are inelastic, and ethylene propylene copolymers, which are thermoplastic/elastomer fibers. Kline teaches that this coating prevents movement of the article during use, therefore it would be obvious to one of ordinary skill in the art to apply the coating taught by Sherrod to the area surrounding the

landing zone fastening elements taught by Kline so as to enhance the peel mode disengagement resistance taught by Kline and to prevent chafing of the user's skin from movement of said article.

With respect to **Claims 12,15,17,21**: Kline teaches that backsheet 26 is comprised of a thermoplastic film, but teaches that the backsheet 26 is elastically extensible, and therefore does not teach inelastic thermoplastic fibers. Sherrod teaches an absorbent laminate for use in absorbent articles that comprises a skid-resistant coating applied to portions of bottomsheet 28. Sherrod teaches that the skid-resistant composition is comprised of ethylvinyl acetate copolymers, which are inelastic, and ethylene propylene copolymers, which are thermoplastic/elastomer fibers. Sherrod teaches by reference to U.S. Patent No. 6,075,179 to McCormick et al that the fibers (i.e. inelastic and elastic) present in bottomsheet laminate 28 are staple fibers, which are known in the art to have a length in the range set forth in claim 4 for both types of fibers. Sherrod teaches that this coating prevents movement of the article during use, therefore it would be obvious to one of ordinary skill in the art to apply the coating taught by Sherrod to the area surrounding the landing zone fastening elements taught by Kline so as to enhance the peel mode disengagement resistance taught by Kline and to prevent chafing of the user's skin from movement of said article.

With respect to **Claim 13**: Please see the rejections of claims 10 and 11 in addition to the following: The outer surface of chassis 22 taught by Kline defines a slip zone as it is free of landing zone elements 49 which contain peel-mode disengagement resistance materials disposed thereon and thereabout.

With respect to **Claim 14**: The areas of resistance to peel mode disengagement taught by Kline and located on and around fastening element 49 will necessarily exhibit a greater coefficient of kinetic friction than that of the non-resistance areas, as this greater coefficient of kinetic friction is what lends the disengagement resistance areas the resistance capability.

With respect to **Claim 16**: Fastening elements 49 taught by Kline comprise strip members having a base body having a first region engagable with retaining material 14 (slip zone) and a second region having fibrous peel mode disengagement resistance material disposed thereon (anti-slip zone).

With respect to **Claims 18-20**: Side panel 30 is comprised of a base elastic layer and contains waist feature 34 which is comprised of inelastic film material (i.e. fibrous layer) and which defines the inner surface of the proximal end of a panel 30. Such material would necessarily exhibit a greater kinetic friction coefficient with the disengagement resistance areas (anti-slip) than predetermined areas other than the resistance areas (slip zone) as that is the nature of a peel resistance zone versus a non-peel-resistant zone.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie J. Hand whose telephone number is 571-272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie J Hand  
Examiner  
Art Unit 3761

MJH

TATYANA ZALUKAEVA  
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